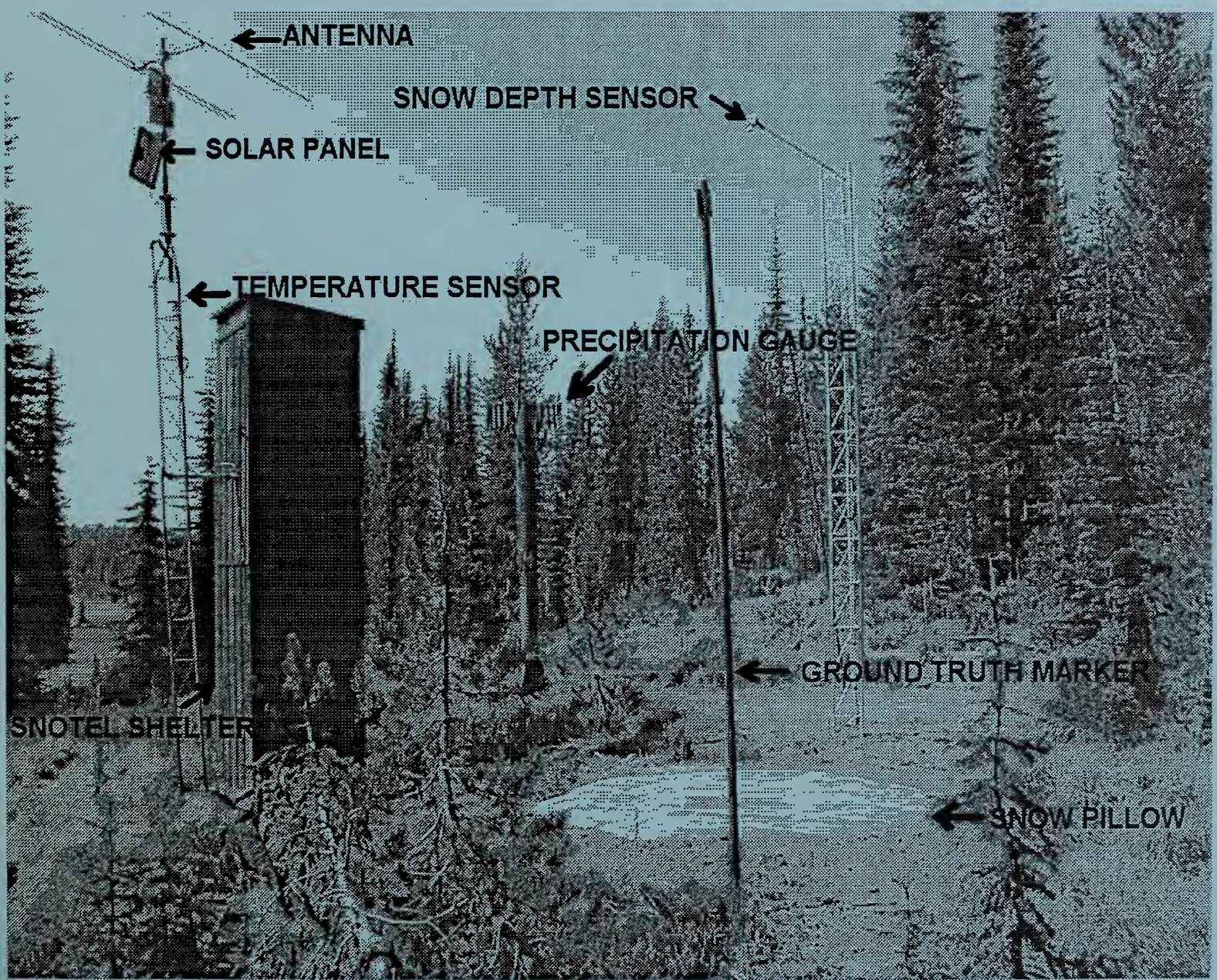
USDA United States Department of Agriculture

Natural Resources Conservation Service

Idaho Basin Outlook Report March 1, 2001



Crater Meadows SNOTEL Site, North Fork Clearwater River Basin, Idaho

Basin Outlook Reports
and
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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

IDAHO WATER SUPPLY OUTLOOK REPORT

March 1, 2001

SUMMARY

Idaho water users should prepare for well below normal runoff volumes this summer. Water supplies will be marginal at best. The key is how to use this limited and valuable resource in the best manner. Much less hydropower will be produced as a result of near record low snow levels in the Pacific Northwest. Electricity buyback offers are currently being discussed by hydropower companies and irrigators to save having to pay higher electric rates. Conservation will be the key this summer to stretch the marginal water supplies. With less then a month of the snow season left, here is what we know:

Monthly precipitation across the state was well below normal for the 2nd consecutive month at only 35-70% of average. Snowpacks are the 2nd lowest since 1961 from the Payette basin north and in Yellowstone National Park. Streamflow forecasts decreased from last February and now range from 40-70% of average across the state. Reservoirs are not expected to fill this year, with the exception of American Falls and Brownlee reservoirs, and will be drafted earlier than normal as a result of dismal inflows. Most will be drained by summer's end. Irrigators in the Payette, Boise, Upper Snake and Bear River may have just an adequate irrigation supply. Irrigation shortages are expected in the central and south central Idaho basins. Natural streamflow irrigators will see well below normal levels and should prepare for shortages.

Mother Nature has the last two cards to play to complete this year's water supply picture - spring precipitation and summer precipitation. A cool wet spring will delay the snowmelt and initial irrigation demand. A dry spring and summer, like last year, will tax the system even more and possibly set the stage for another bad fire season. In either scenario, water users should be prepared for extremely low stream volumes as well as minimum streamflow levels to occur by mid to late summer.

SNOWPACK

Don't let the valley snow in town fool you. There's not much snow in the mountains. The Payette, Salmon, Clearwater and Panhandle Region snowpacks are 45-55% of average and the 2nd lowest since at least 1961. Only 1977 had less snow water than this year. Similarly in Yellowstone National Park, four combined long-term snow measuring stations are the 2nd lowest since 1938; only 1977 had less snow than this year! In 1977, the March 1 snowpack was only 10-40% of average. Overall the snowpack in the Snake River above Palisades Reservoir is 60% of average, the 3rd lowest since 1961. The Henrys Fork, Big Lost, Big Wood and Boise snowpacks are about 57% of average and the 3rd or 4th lowest since 1961. The best snowpacks are across southern Idaho from the Owyhee basin to the Bear River basin and range from 65-80% of average.

Cold temperatures this year have kept snow on the ground in the valleys longer then usual. Spokane Airport in Washington just set a new record of 117 consecutive days with at least 1 inch of snow on the ground. Some low to mid-elevation snow measuring stations have more snow water than higher elevation sites in the Boise and Clearwater basins. In a low snow year like this year, this is not a good sign because the high elevation snowpack provides that mid to late summer streamflow.

PRECIPITATION

February precipitation ranged from a low of about 40% of average in the Salmon, west-central, central and southwest corner of the state to 65% in the Clearwater, Upper Snake and Bear river basins. Actual amounts were in the 0.5 - 6.0 inch range; normal February amounts should be in the 2-9 inch range. Water year to date precipitation ranges from 47% of average in the Panhandle Region to 68% across the southern Idaho border. With only one month left in the snow season, little hope remains to improve the snow water content levels to a much higher level. A cool wet spring, April-May-June, would delay the onset of snowmelt, initial irrigation demand, and provide additional soil moisture during the planting season.

RESERVOIRS

Reservoir storage remains fairly steady from month to month this year as a result of the lack of winter rains and no drafting for flood control. The lack of winter rains has also resulted in below normal streamflows which is not allowing reservoir storage to increase as it typically does during the winter. Reservoirs or reservoir systems that are 53-63% of full include: Dworshak, Payette, Boise, Little Wood, and Bear Lake. The 8 major Upper Snake reservoirs have a combined storage of 69% full, however, Palisades is only half full. Salmon Falls Reservoir and Coeur d'Alene Lake are only 11% of capacity. Oakley Reservoir is 34% full; and Owyhee Reservoir is 41% full. Brownlee Reservoir remains at 92% of capacity, but the projected inflow to Hell's Canyon Dam is only 41% of average. None of the major reservoirs or reservoir systems are expected to fill this year. Drafting will occur earlier as a result of the lack of streamflow. Many reservoirs will be near their minimum levels by summer's end.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report.

STREAMFLOW

The lack of February moisture resulted in streamflow forecasts dropping another 5-10 percentage points from the previous month. Streamflow forecasts now range from 40-70% across the state. The lowest forecasts call for 40-50% of average in the Pend Oreille, Weiser, Payette, Boise, Big Wood, Blackfoot, American Falls, and Hells Canyon drainages. The lack of moisture this winter has also resulted in some natural flowing streams near their minimum for this time of year. November-January streamflow volumes as provided by the USGS are about 25% of average in the Coeur d'Alene, St. Joe and Weiser rivers, and 45% for Dworshak Reservoir inflow. Elsewhere, November-January volumes were 55-75% of average with the exception of the Big Wood and Little Wood rivers which were near normal due to October precipitation at 250% of average. Irrigation shortages are expected in the central and south central Idaho basins as indicated by the Surface Water Supply Index (SWSI) and for users who divert directly from the stream. Users will see streamflow levels return to baseflow levels earlier than normal and potential minimum streamflow levels occurring in mid to late summer. Irrigators who rely on storage water in the Boise, Payette, Upper Snake and Bear Lake will have a marginal supply at best. Water users who rely on small reservoirs or instream water will experience shortages.

RECREATION

Cold temperatures across the state are keeping the snowpack firm and providing excellent skiing opportunities at Idaho ski resorts even with the lack of snowfall this year. However, backcounty skiers and snowmobilers are finding a thin and unconsolidated snowpack which is making travel difficult and hazardous to equipment. Our Snow Survey snowcat could barely make it through the dry fluffy snow in the Weiser basin the end of February, nor have we taken our snow machines out this year. Reports are coming in of snowmobilers breaking their machines on rocks and stumps that are barely covered. Be careful out there!

River runners should be making plans to put on the river earlier this year. The high water season will be nearly non-existent as a result of the low snow, however this will also provide a long boating season on the main Salmon River this year. Streams will return to baseflow levels much earlier than normal, especially on the tributaries by mid summer. Boaters on the Middle Fork Salmon River should expect to fly into Indian Creek Guard Station by mid summer, or have a rocky ride from Boundary Creek put-in. Reservoir storage water will help extend the river running season on the Payette River and provide more consistent levels. Power boaters and recreationists at reservoirs will experience earlier drawdowns due to dismal inflows.

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of March 1, 2001

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

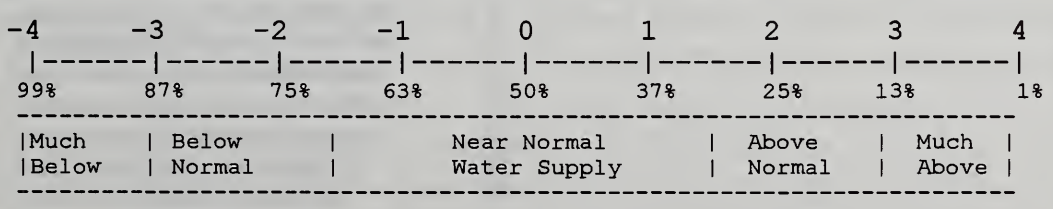
SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

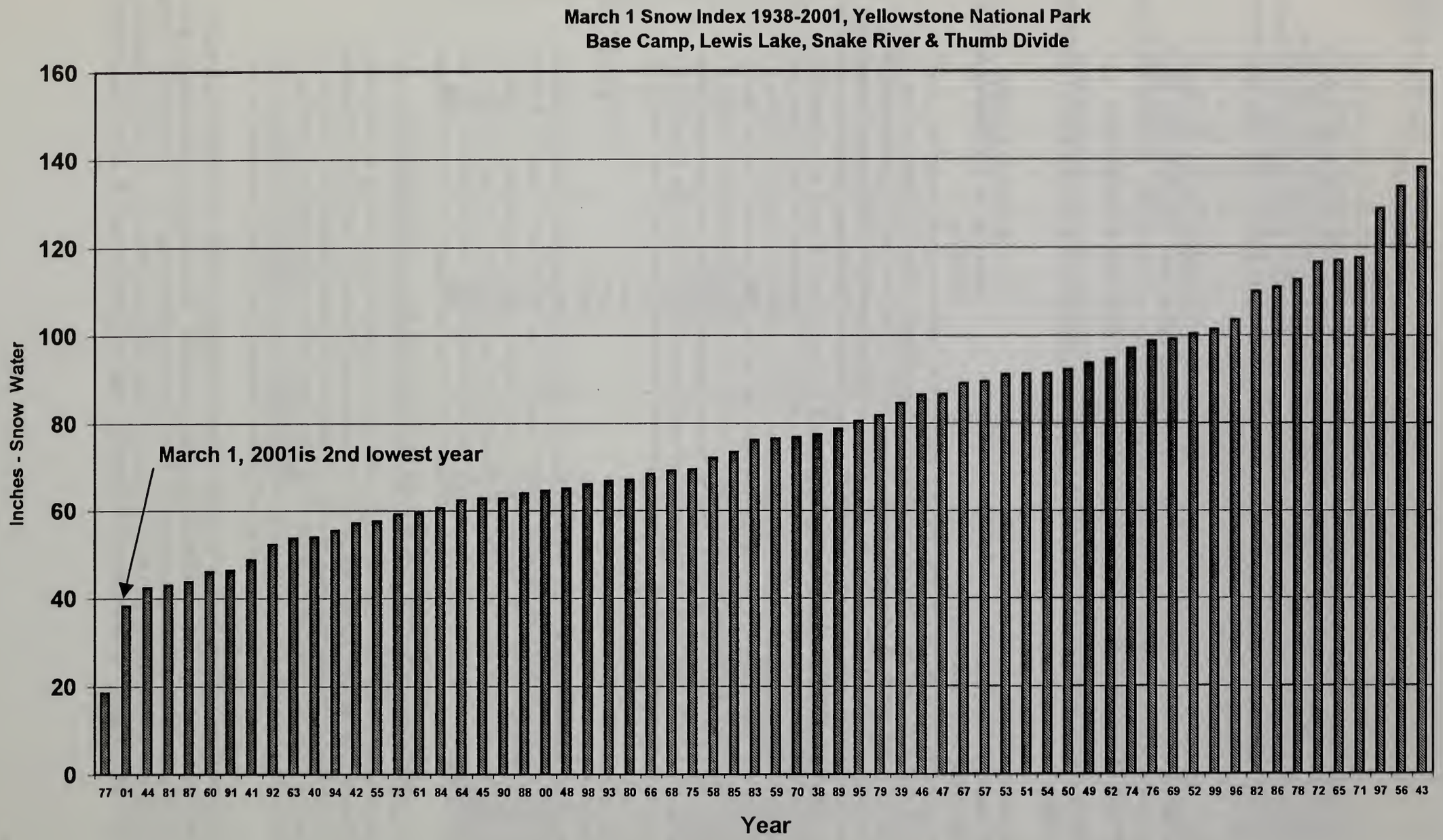
US National Weather Service
US Bureau of Reclamation
Idaho Water Users Association
US Army Corps of Engineers
Idaho Dept. of Water Resources
PacifiCorp

BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-3.3	1987/94	NA
CLEARWATER	-2.9	1987/92	NA
SALMON	-3.1	1988	NA
WEISER	-3.3	1994/88	NA
PAYETTE	-2.9	1991/88	NA
BOISE	-3.2	1987/91	-2.6
BIG WOOD	-2.8	1990	-1.4
LITTLE WOOD	-2.2	1990	-2.1
BIG LOST	-2.4	1990/91	-0.8
LITTLE LOST	-2.5	1977	0.0
HENRYS FORK	-2.3	1987/90	-3.3
SNAKE (AMERICAN FALLS)	-2.5	1987/94	-2.0
OAKLEY	-1.0	1987	0.0
SALMON FALLS	-2.0	1994	0.0
BRUNEAU	-1.9	1991	NA
OWYHEE	-1.1	1994	NA
BEAR RIVER	-1.6	1978	-3.8

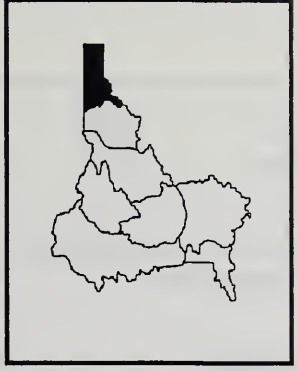
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

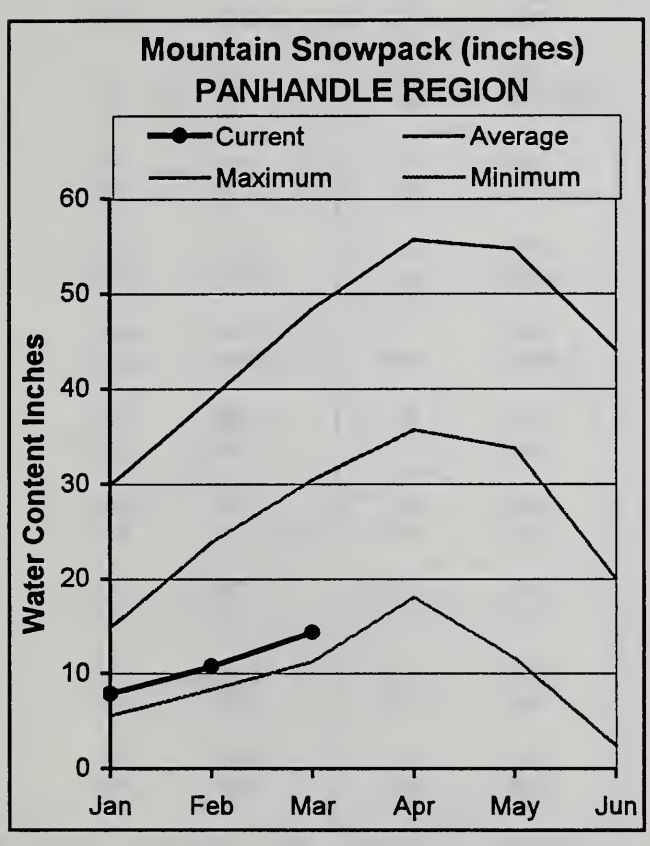


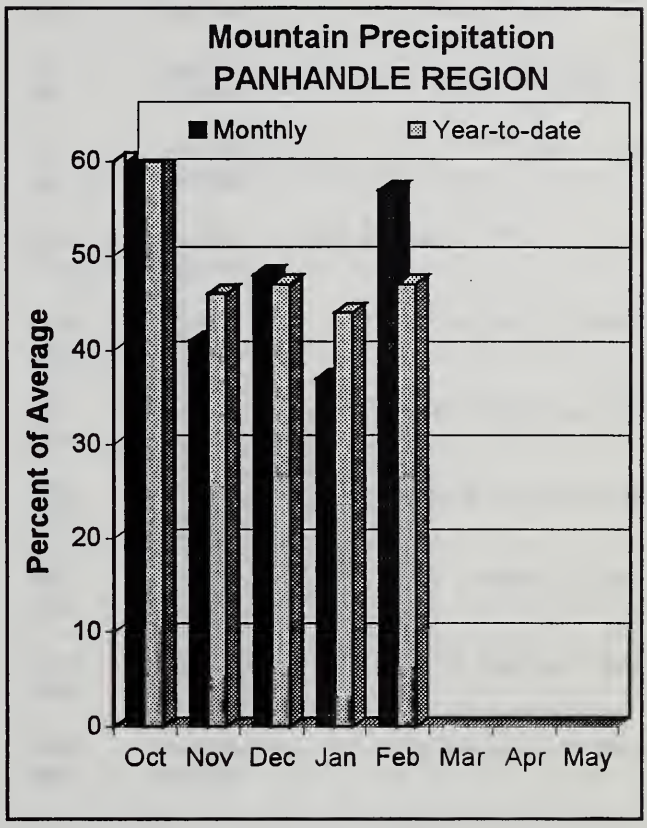
Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.


March 1 Snow Index 1938-2001, Yellowstone National Park
Base Camp, Lewis Lake, Snake River & Thumb Divide
Inches - Snow Water
160
140
120
100
80
60
40
20
0
March 1, 2001is 2nd lowest year
77 01 44 81 87 60 91 41 92 63 40 94 42 55 73 61 84 64 45 90 88 00 48 98 93 80 66 68 75 58 85 83 59 70 38 89 95 79 39 46 47 67 57 53 51 54 50 49 62 74 76 69 52 99 96 82 86 78 72 65 71 97 56 43
Year

PANHANDLE REGION
MARCH 1, 2001







WATER SUPPLY OUTLOOK

February precipitation was once again below normal at 57% of average. Monthly precipitation has been well below for the past 10 months with the exception of September 2000. Precipitation, since October 1, is the lowest in the state at a dismal 47% of average. Low elevation snowpacks, such as Hayden Lake, are better at 76% of average while the higher elevation snowpacks which provide the bulk of the snowmelt runoff are in the 35-45% of average for individual snow measuring sites. Overall, the Panhandle Region snowpack is 47% of average. This is the second lowest since 1969, only 1977 had less snow water. On March 1, 1977, the snowpack was a meager 38% of average. Coeur d'Alene Lake is only 11% of its normal summer level, basically at its natural level. Pend Oreille and Priest lakes are about 45% of their summer level. Currently, natural streamflow levels are near record low as a result of the unusually dry winter. Streamflow forecasts decreased from last month and now range from 50-60% of average. Water users should prepare for much below normal streamflow levels for the rest of the water year and earlier return to low flow conditions this summer.

PANHANDLE REGION
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	APR-JUL	2709	3439	3770	52	4101	4831	7199
	APR-SEP	3200	3977	4330	52	4683	5460	8275
MOYIE RIVER at Eastport	APR-JUL	168	199	220	53	241	272	415
	APR-SEP	176	209	231	54	253	286	430
SMITH CREEK	APR-JUL	48	62	72	60	82	96	120
	APR-SEP	49	65	76	60	87	103	126
BOUNDARY CREEK	APR-JUL	46	60	70	59	80	94	119
	APR-SEP	48	63	73	58	83	98	125
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	3405	5375	6270	54	7165	9135	11730
	APR-SEP	3747	5915	6900	53	7885	10053	12910
PEND OREILLE Lake Inflow (2)	APR-JUL	4246	5660	6620	50	7580	8994	13150
	APR-SEP	3935	5903	7240	50	8577	10545	14370
PRIEST near Priest River (1,2)	APR-JUL	276	372	415	51	458	554	812
	APR-SEP	276	382	430	50	478	584	865
COEUR D'ALENE at Enaville	APR-JUL	280	383	454	59	525	628	769
	APR-SEP	290	397	470	58	543	650	809
ST. JOE at Calder	APR-JUL	458	582	666	57	750	874	1169
	APR-SEP	485	613	700	57	787	915	1237
SPOKANE near Post Falls (2)	APR-JUL	1014	1348	1575	60	1802	2136	2627
	APR-SEP	1000	1345	1580	58	1815	2160	2720
SPOKANE at Long Lake (2)	APR-JUL	1095	1482	1745	60	2008	2395	2905
	APR-SEP	1188	1597	1875	60	2153	2562	3128

PANHANDLE REGION
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2168.0	2428.0	2205.0
FLATHEAD LAKE	1791.0	844.0	712.0	881.0
NOXON RAPIDS	335.0	305.9	326.1	298.1
PEND OREILLE	1561.3	734.4	711.5	798.0
COEUR D'ALENE	238.5	26.3	124.5	149.1
PRIEST LAKE	119.3	53.0	50.0	54.6

PANHANDLE REGION
Watershed Snowpack Analysis - March 1, 2001

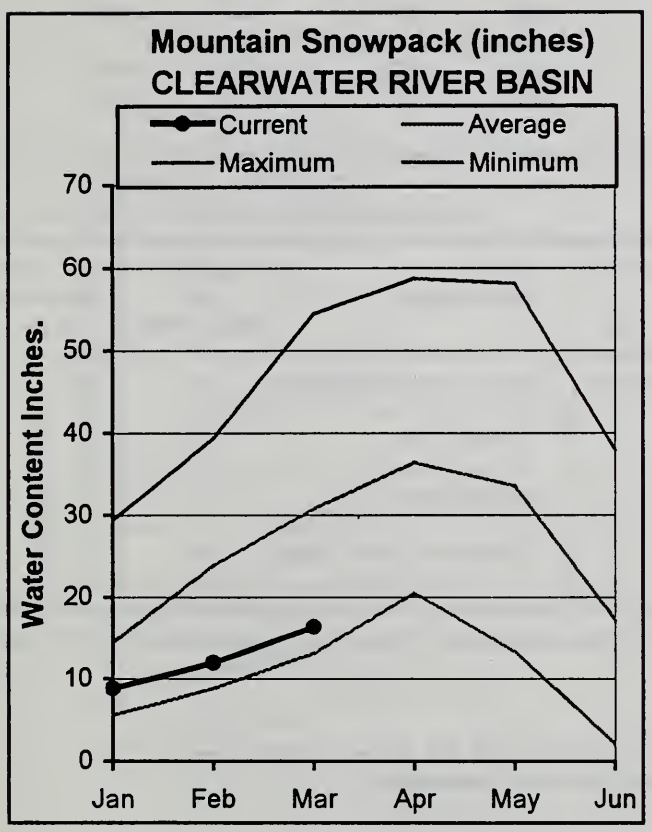
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	32	56	49
Moyie River	12	59	51
Priest River	4	48	48
Pend Oreille River	97	64	59
Rathdrum Creek	5	62	81
Hayden Lake	2	64	76
Coeur d'Alene River	8	59	62
St. Joe River	3	51	47
Spokane River	17	59	65
Palouse River	2	69	79

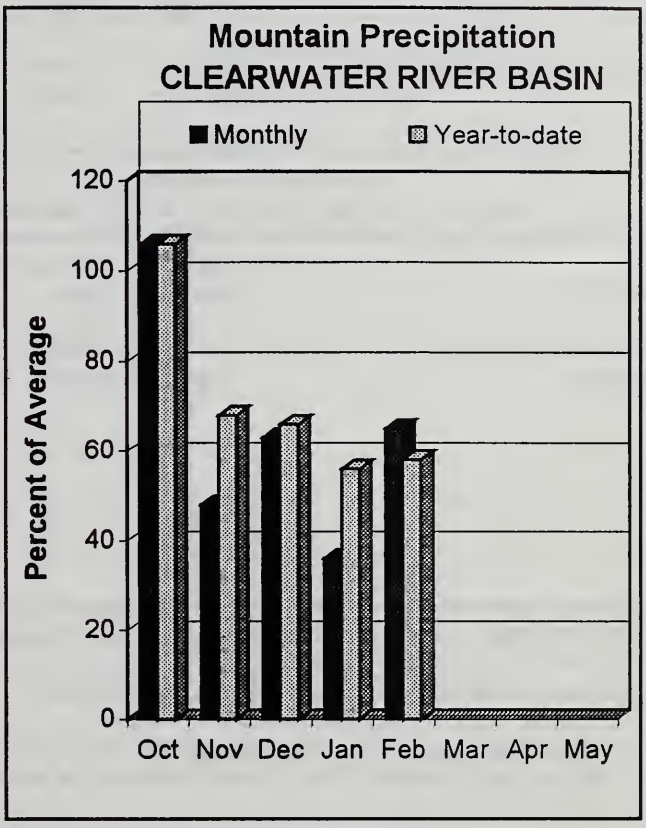
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

CLEARWATER RIVER BASIN
MARCH 1, 2001





WATER SUPPLY OUTLOOK

February precipitation in the Clearwater River basin was 65% of average, one of the highest in the state, but remains at only 58% since October 1. Water year to date amounts range from 11 inches at Nez Perce Camp SNOTEL site to 28 inches at Hemlock Butte SNOTEL site. Normal water year to date amounts should be in the 19-48 inch range for these sites. Cold temperatures have kept the low elevation snow lingering in the valley. Some lower elevation snow measuring sites are reporting nearly as much snow water content as the higher elevation sites. The two snow measuring sites in the Palouse basin are 79% of average. In the Clearwater basin, snowpacks range from 52% of average in the North Fork Clearwater to 59% in the Selway basin. Last month, an 8-station snow index for the North Fork Clearwater River basin showed the snowpack was the 3rd lowest since 1961 with only years 1977 and 1981 having less snow than this year! Now the same index shows the snowpack is the 2nd lowest since 1961. These 8 sites have an average of 19 inches this year; in 1981 they had an average of 20 inches and only 16 inches in 1977. Normally, each site should have about 37 inches of snow water. Dworshak Reservoir decreased from 60% of capacity at the beginning of February to 58% by the end of the month. Dworshak Reservoir April-July inflow forecast decreased by about 10 percentage points to 58% of average. Dworshak Reservoir is not expected to refill this year. Water users will see much below normal streamflow peaks and volumes this summer. River runners should be ready to float the rivers as soon as the snow starts melting. Streams will return to summer baseflow levels much earlier than normal due to the lack of snow.

CLEARWATER RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DWORSHAK RESV INFLOW (1,2)	APR-JUL	903	1348	1550	58	1752	2197	2687
	APR-SEP	1001	1461	1670	58	1879	2339	2858
CLEARWATER at Orofino (1)	APR-JUL	2211	2877	3180	67	3483	4149	4729
	APR-SEP	2305	3017	3340	67	3663	4375	4990
CLEARWATER at Spalding (1,2)	APR-JUL	3172	4305	4820	63	5335	6468	7618
	APR-SEP	3350	4540	5080	63	5620	6810	8051

CLEARWATER RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2016.7	2294.2	2163.0

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

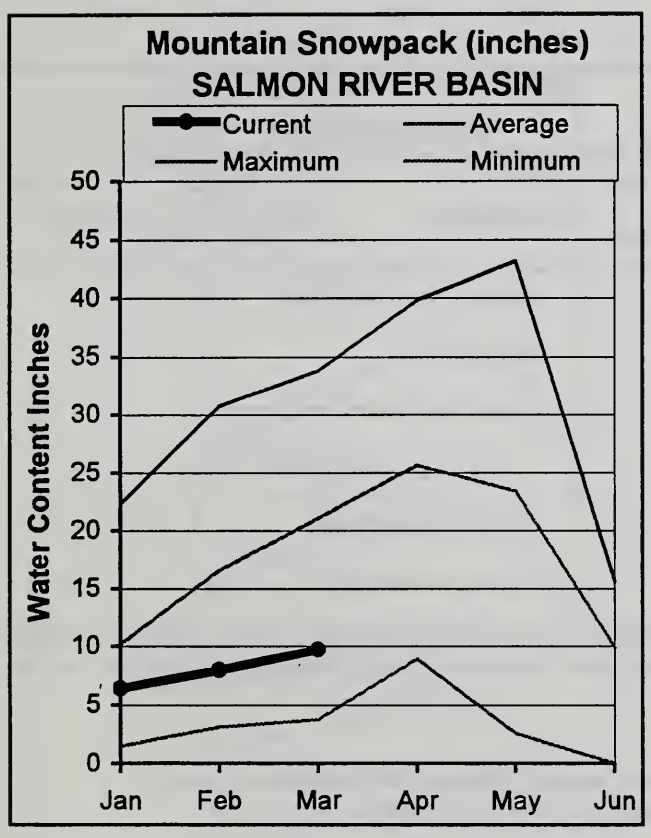
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	50	52
Lochsa River	3	58	54
Selway River	5	58	59
Clearwater Basin Total	18	54	55

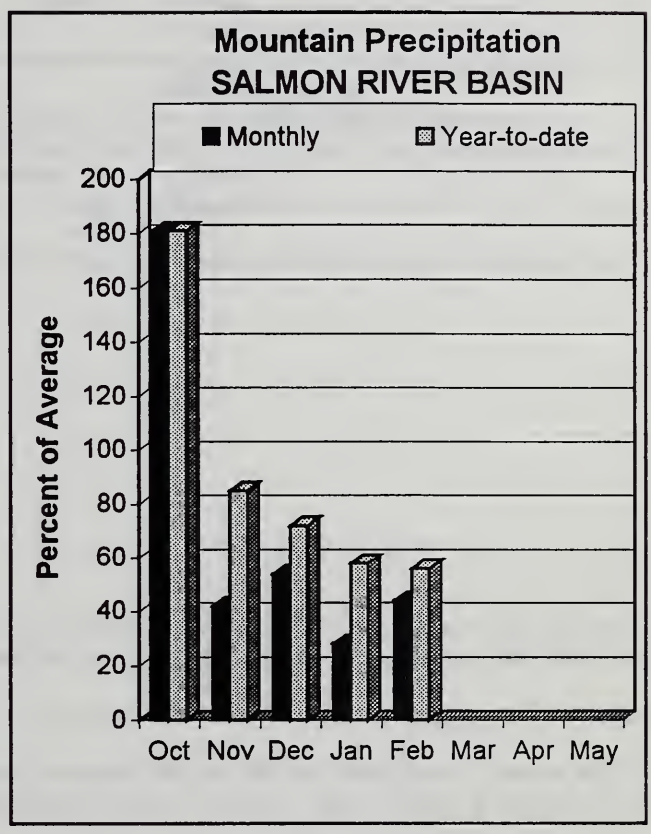
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SALMON RIVER BASIN
MARCH 1, 2001





WATER SUPPLY OUTLOOK

Monthly precipitation has been only half of normal or less the past four months. February precipitation was 44% of average, one of the lowest amounts statewide. Monthly precipitation totals were less than 1.0 inch at several SNOTEL sites in the Lemhi basin. Water year to date precipitation is only 56% of average. Snowpack decreases from west to east with the Lemhi basin reporting the best snowpack at 65% of average, the Salmon River basin above Salmon is 51%, while the Middle Fork, South Fork and Little Salmon basins are about 41% of average. Overall, the Salmon basin snowpack is 51% of average. The snowpack in the headwaters of these Salmon tributaries is the 2nd lowest since records start in 1945. Only 1977 had less snow, and there was hardly any snow that year. Streamflow forecasts dropped about 10 percentage points from last month and now call for 52% of average for the Salmon River above Salmon and 56% for the Salmon River at White Bird. Water users and river runners should plan for low runoff volumes and early return to baseflow levels. Users should be prepared for minimum streamflow levels by mid to late summer especially on the Lemhi River. In 1994, another low snow year, the Middle Fork Salmon River peaked at 4.5 feet in early May and was at 2.0 feet by early July. Banner Summit SNOTEL site peaked at 16 inches of snow water in mid-April 1994. This year there is only 9 inches at Banner Summit. However, the lack of a high water season also means a long and extended boating season on the main Salmon River!

SALMON RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<=== Drier ===== Future Conditions ======= Wetter ====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	APR-JUL	236	387	455	52	523	674	869
	APR-SEP	292	459	535	53	611	778	1019
SALMON at White Bird (1)	APR-JUL	1977	2928	3360	56	3792	4743	5956
	APR-SEP	2191	3242	3720	56	4198	5249	6602

SALMON RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

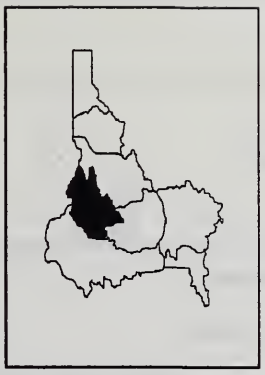
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	10	54	51
Lemhi River	10	68	65
Middle Fork Salmon River	3	44	40
South Fork Salmon River	3	43	41
Little Salmon River	4	44	42
Salmon Basin Total	29	53	51

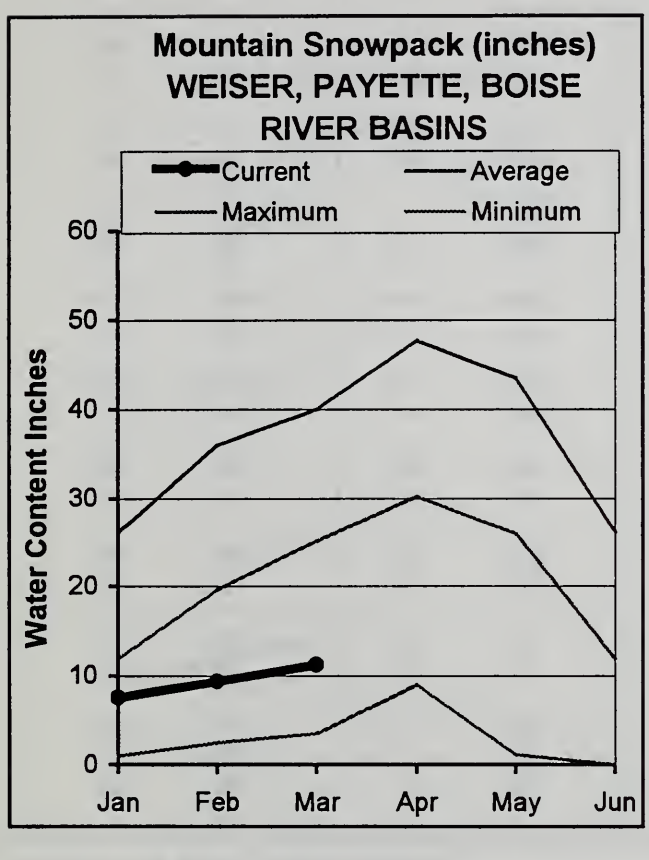
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

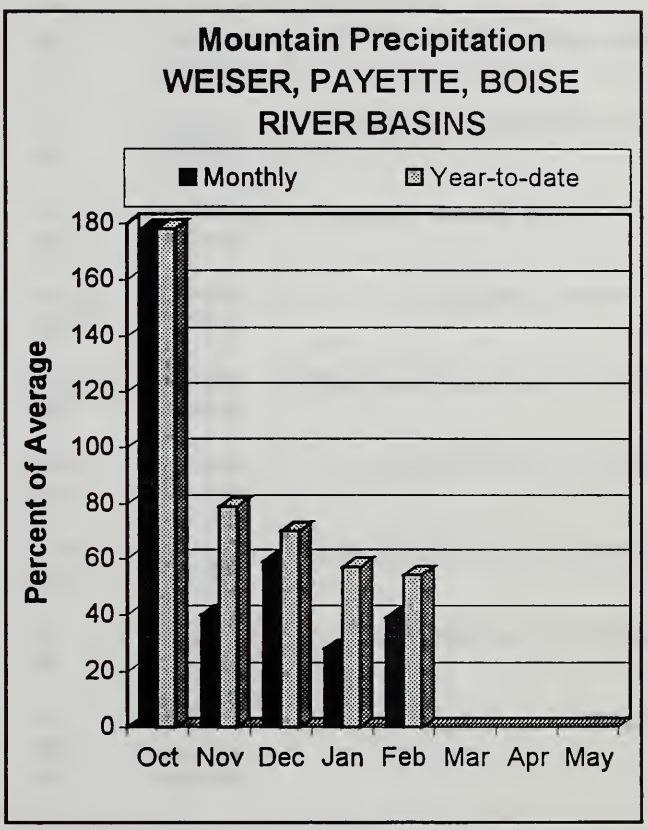
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS MARCH 1, 2001







WATER SUPPLY OUTLOOK

Cold temperatures kept the snow on the ground longer than usual in the Treasure Valley. Snow water content levels are near to above normal in the Boise Foothills and low elevations. However, as you increase in elevation, snow water content levels remain fairly consistent and do not increase. For example, Bogus Basin and Mores Creek SNOTEL sites, which are about 6,100 feet in elevation, have as much water in the snow as Vienna Mine SNOTEL site at 8,960 feet. This occasionally happens but is not a good sign in a low year like this. February precipitation was only 39% of average, 10 percentage points better than in January. Water year to date precipitation is only 54% of average. The low elevation drainage of Mores Creek has the best snowpack at 74% of average. The Payette and Weiser snowpack is 49% and 53% of average, respectively, the 2nd lowest since 1961, only 1977 had less snow. The Boise basin snowpack is 59% of average, 3rd lowest since 1961; only years 1977 and 1991 had less snow. The Boise and Payette reservoir systems are 53% and 60% of capacity, respectively. Mann Creek Reservoir is only 19% of capacity. Streamflow forecasts decreased significantly from last month and now call for 46% for the Payette River at Horseshoe Bend and 49% for the Boise River near Boise. Conservation and wise use will be the key for stretching water supplies as far as possible this year. Water supplies will be marginal at best for Payette and Boise users. Weiser River water users can expect low water levels for the rest of this year. In 1977, the Weiser River did not even show a slight rise during the snowmelt season. Reservoirs will be drafted earlier than normal and will be empty by summers end, if not before.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WEISER near Weiser (1)	APR-SEP	4.0	107	167	40	227	360	415
SF PAYETTE at Lowman	APR-JUL	162	207	238	55	269	314	432
	APR-SEP	187	238	273	56	308	359	488
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	29	49	59	44	69	89	135
	APR-SEP	31	53	63	44	73	95	143
LAKE FORK PAYETTE near McCall	APR-JUL	33	41	47	56	53	62	84
	APR-SEP	34	43	49	56	55	64	88
NF PAYETTE nr Cascade (1,2)	APR-JUL	62	160	205	41	250	348	496
	APR-SEP	66	172	220	41	268	374	533
NF PAYETTE nr Banks (2)	APR-JUL	104	197	260	40	323	416	648
	APR-SEP	116	215	283	41	351	450	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	329	609	736	46	863	1143	1618
	APR-SEP	382	687	826	47	965	1270	1755
BOISE near Twin Springs (1)	APR-JUL	194	294	340	54	386	486	631
	APR-SEP	198	307	357	52	407	516	686
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	111	214	260	48	306	409	544
	APR-SEP	132	241	290	50	339	448	582
MORES CREEK near Arrowrock Dam.	APR-JUL	33	56	71	55	86	109	129
	APR-SEP	35	58	74	55	90	113	134
BOISE near Boise (1,2)	APR-JUN	316	506	593	47	680	870	1264
	APR-JUL	309	561	675	48	789	1041	1421
	APR-SEP	358	624	745	49	866	1132	1535

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	2.1	7.0	6.0
CASCADE	693.2	416.6	519.8	402.6
DEADWOOD	161.9	93.0	119.4	83.9
ANDERSON RANCH	450.2	278.2	378.4	275.5
ARROWROCK	272.2	153.4	238.8	228.4
LUCKY PEAK	293.2	109.6	126.6	119.7
LAKE LOWELL (DEER FLAT)	165.2	97.3	103.3	127.3

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - March 1, 2001

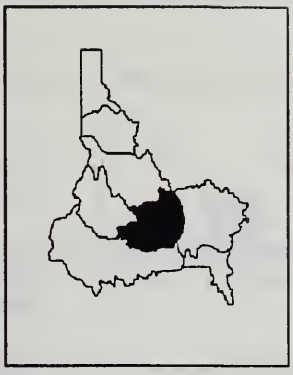
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Mann Creek	2	51	63
Weiser River	5	51	53
North Fork Payette	8	48	47
South Fork Payette	5	50	45
Payette Basin Total	13	49	46
Middle & North Fork Boise	6	53	50
South Fork Boise River	9	59	55
Mores Creek	4	68	69
Boise Basin Total	15	60	57
Canyon Creek	2	70	80

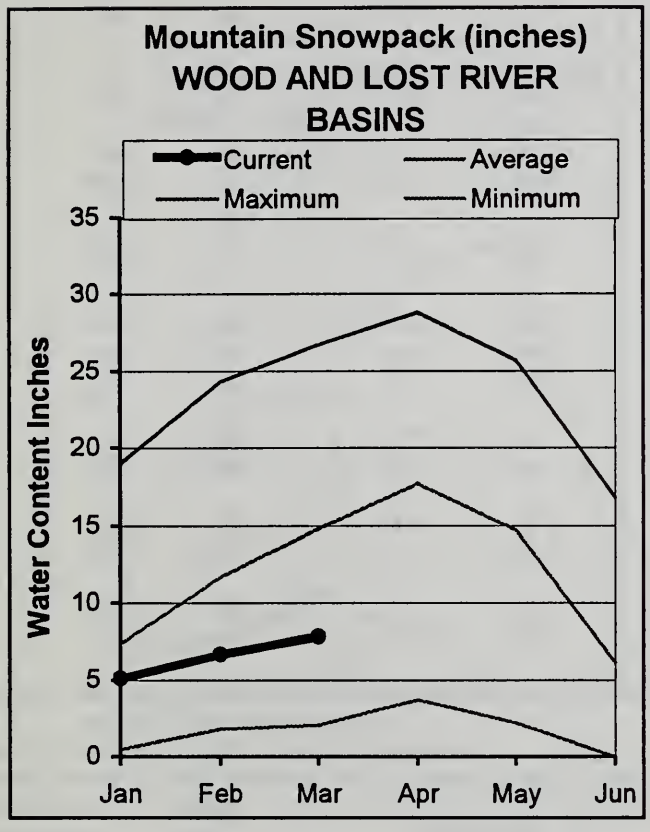
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

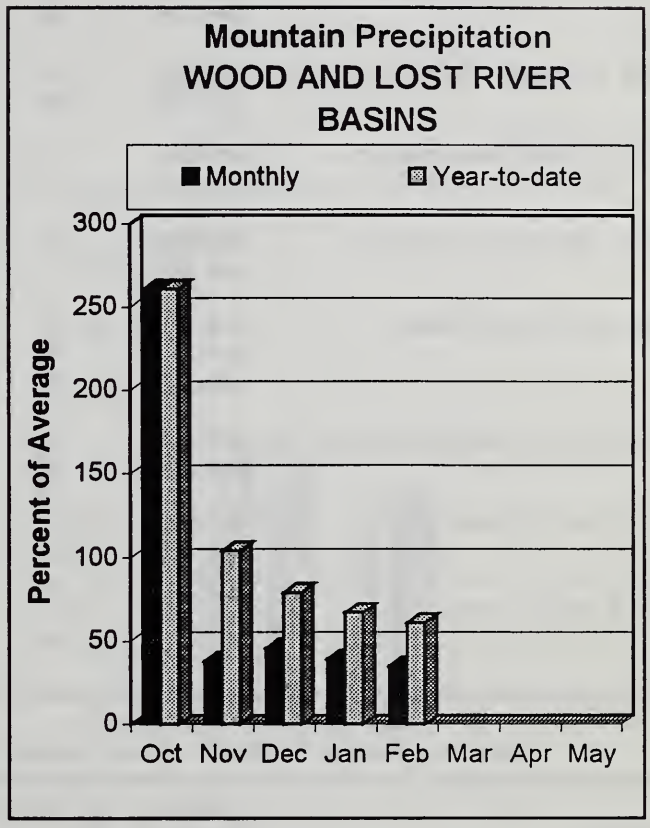
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WOOD and LOST RIVER BASINS
MARCH 1, 2001







WATER SUPPLY OUTLOOK

The snowpack in these central Idaho mountains is the 4th lowest since 1961. Only years 1977, 1991 and 1987 had less snow (and in that order) than this year. February precipitation was slightly less than January at 35% of average. Water year to date precipitation is 61% of average. Overall, snowpacks are about 55% of average in these basins. The highest snowpacks are in Camas Creek basin at 60% of average, and the lowest are in the headwaters of the Big Wood basin at 50% of average. Reservoir storage remains low with Magic Reservoir 25% full for March 1. Mackay Reservoir is 53% full. Little Wood Reservoir sits the best at 56% full. A soil moisture model for the Big Wood basin above Hailey indicates there is not a soil moisture deficit as a result of October moisture. This is also indicated by the November-January streamflow levels being near normal in the Big Wood and Little Wood basins even though monthly precipitation is well below normal this winter. Streamflow forecasts decreased 5-15 percentage points from last month and now range from 40-70% of average for these central Idaho streams. Water users should be prepared for short water supplies. Normal or better precipitation this spring and summer will help extend water supplies. The Surface Water Supply Index (SWSI), which combines reservoir storage with projected streamflow, is below the agricultural water supply shortage threshold for the Big Wood, Big Lost and Little Lost basins.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD at Hailey (1)	APR-JUL	73	117	140	55	165	229	255
	APR-SEP	82	130	156	54	184	254	289
BIG WOOD near Bellevue	APR-JUL	25	48	68	37	91	132	183
	APR-SEP	30	55	76	39	101	144	197
CAMAS CREEK near Blaine	APR-JUL	18.0	31	43	42	56	80	102
	APR-SEP	18.0	32	44	43	58	81	103
BIG WOOD below Magic Dam (2)	APR-JUL	1.0	74	124	42	174	247	295
	APR-SEP	3.0	72	124	40	176	252	310
LITTLE WOOD near Carey (2)	MAR-JUL	9.2	29	43	43	57	77	100
	MAR-SEP	11.0	33	47	44	61	83	108
BIG LOST at Howell Ranch	APR-JUN	50	72	87	62	102	124	141
	APR-JUL	50	83	106	59	129	162	181
	APR-SEP	59	97	122	59	147	185	206
BIG LOST below Mackay Reservoir (2)	APR-JUL	28	59	81	53	103	134	152
	APR-SEP	38	74	98	53	122	158	184
LITTLE LOST blw Wet Creek	APR-JUL	13.3	17.9	21	68	24	29	31
	APR-SEP	15.9	22	26	67	30	36	39
LITTLE LOST nr Howe	APR-JUL	17.3	21	23	70	25	29	33
	APR-SEP	22	27	30	70	33	38	43

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	48.2	111.6	96.0
LITTLE WOOD	30.0	16.9	21.7	17.7
MACKAY	44.4	23.5	32.1	31.9

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - March 1, 2001

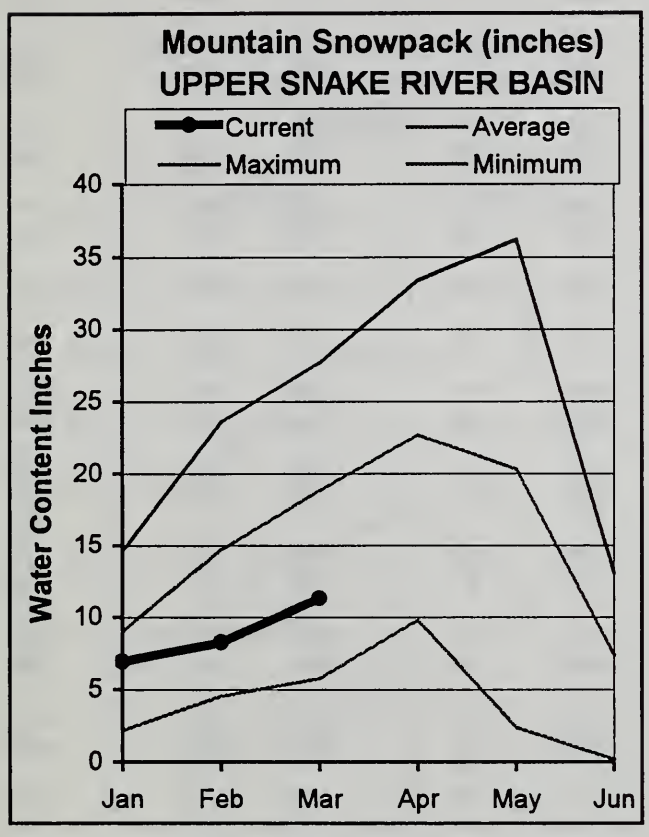
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Big Wood ab Magic	8	58	53
Camas Creek	5	59	60
Big Wood Basin Total	12	59	55
Little Wood River	5	74	64
Fish Creek	3	68	57
Big Lost River	7	69	60
Little Lost River	4	64	56
Birch-Medicine Lodge Cree	4	76	73

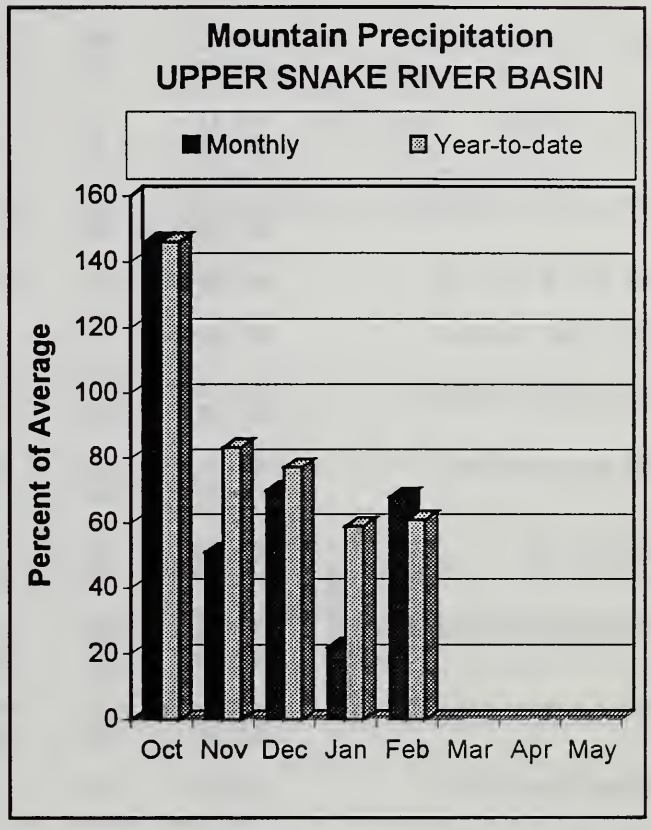
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER SNAKE RIVER BASIN
MARCH 1, 2001





WATER SUPPLY OUTLOOK

February precipitation was 68% of average, one of the highest in the state after being the lowest in the state at only 22% of average in January. This is the 4th consecutive month with well below average monthly precipitation. Water year to date precipitation is 61% of average. Lewis Lake Divide SNOTEL site, located in Yellowstone NP, has received only 16 inches of precipitation since October 1. This is the 2nd lowest since records started in 1964. Normal amounts are 33 inches; 1977 total was 10.7 inches. The snow water content at Lewis Lake Divide SNOTEL is 14.9 inches. This is the 4th lowest since 1930 with only 1977, 1931 and 1941 having less snow. A 4-station long-term snow index of Yellowstone NP sites also shows the snowpack is the 2nd lowest since 1938. Elsewhere, the snowpack ranges from 57% of average in the Henrys Fork, 3rd lowest since 1961, to 76% of average in the low elevation Willow Creek basin. Overall, the snowpack is 62% of average for the Snake River above American Falls Reservoir. The 8 major reservoirs in the upper Snake system are 69% of capacity. Palisades Reservoir is only half full. Streamflow forecasts decreased slightly from last month and now range from 63% of average for the Snake River near Heise to 74% of average for Henrys Fork near Ashton. The Upper Snake Reservoir system is not projected to fill and will be depleted by the end of the season. Water supplies will be marginal at best for the Henrys Fork and mainstem Snake River water users. Conservation and wise use is the key to making this year's limited supplies last through the season. Natural streamflow users should be prepared for well below normal runoff volumes, as summer baseflow levels will occur much earlier due to dismal snow levels.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<= Drier = Future Conditions = Wetter =>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK near Ashton (2)	APR-JUL	319	369	403	74	437	487	544
	APR-SEP	432	490	530	73	570	628	730
HENRYS FORK near Rexburg (2)	APR-JUL	553	714	823	67	932	1093	1228
	APR-SEP	706	887	1010	65	1133	1314	1551
FALLS near Squirrel (1,2)	APR-JUL	182	236	260	71	284	338	364
	APR-SEP	227	283	308	71	333	389	432
TETON near Driggs	APR-JUL	62	87	105	69	123	148	152
	APR-SEP	88	119	140	70	161	192	199
TETON near St. Anthony	APR-JUL	169	226	265	70	304	361	377
	APR-SEP	206	271	315	69	359	424	457
SNAKE near Moran (1,2)	APR-SEP	411	534	590	68	646	769	869
PACIFIC CREEK at Moran	APR-SEP	76	97	111	67	125	146	166
SNAKE above Palisades (2)	APR-JUL	1257	1446	1575	68	1704	1893	2311
	APR-SEP	1459	1674	1820	68	1966	2181	2671
GREYS above Palisades	APR-JUL	142	181	208	63	235	274	333
	APR-SEP	161	205	235	61	265	309	388
SALT near Etna	APR-JUL	99	153	190	60	227	281	319
	APR-SEP	128	192	235	59	278	342	399
PALISADES RESERVOIR INFLOW (1,2)	APR-JUL	1458	1899	2100	65	2301	2742	3226
	APR-SEP	1677	2167	2390	64	2613	3103	3763
SNAKE near Heise (2)	APR-JUL	1664	1989	2210	64	2431	2756	3451
	APR-SEP	1934	2301	2550	63	2799	3166	4049
BLACKFOOT RESV INFLOW	APR-JUN	19.0	42	57	50	72	95	113
SNAKE nr Blackfoot (1,2)	APR-JUL	1662	2465	2830	64	3195	3998	4444
	APR-SEP	2237	3113	3510	64	3907	4783	5482
PORTNEUF at Topaz	MAR-JUL	40	50	56	66	63	73	86
	MAR-SEP	48	60	68	64	76	88	107
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	31	824	1220	40	1616	2488	3066
	APR-SEP	33	866	1320	40	1774	2773	3303

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	86.2	88.1	79.5
ISLAND PARK	135.2	111.5	111.5	109.3
GRASSY LAKE	15.2	12.8	12.5	11.0
JACKSON LAKE	847.0	638.3	653.5	481.0
PALISADES	1400.0	695.6	1247.1	1063.1
RIRIE	80.5	43.2	46.1	36.7
BLACKFOOT	348.7	210.1	284.2	239.7
AMERICAN FALLS	1672.6	1382.6	1414.6	1277.0

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Camas-Beaver Creeks	4	69	56
Henrys Fork-Falls River	12	66	57
Teton River	7	75	65
Henrys Fork above Rexburg	19	69	59
Snake above Jackson Lake	9	65	57
Gros Ventre River	3	78	62
Hoback River	6	71	62
Greys River	4	66	62
Salt River	5	66	65
Snake above Palisades	29	68	60
Willow Creek	6	79	76
Blackfoot River	5	66	61
Portneuf River	6	66	60
Snake abv American Falls	43	69	62

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table. The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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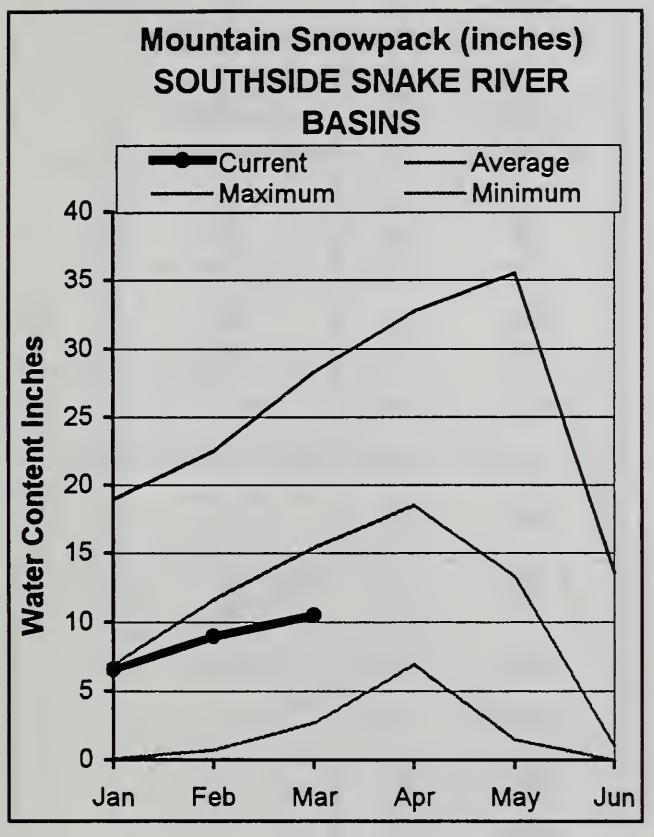
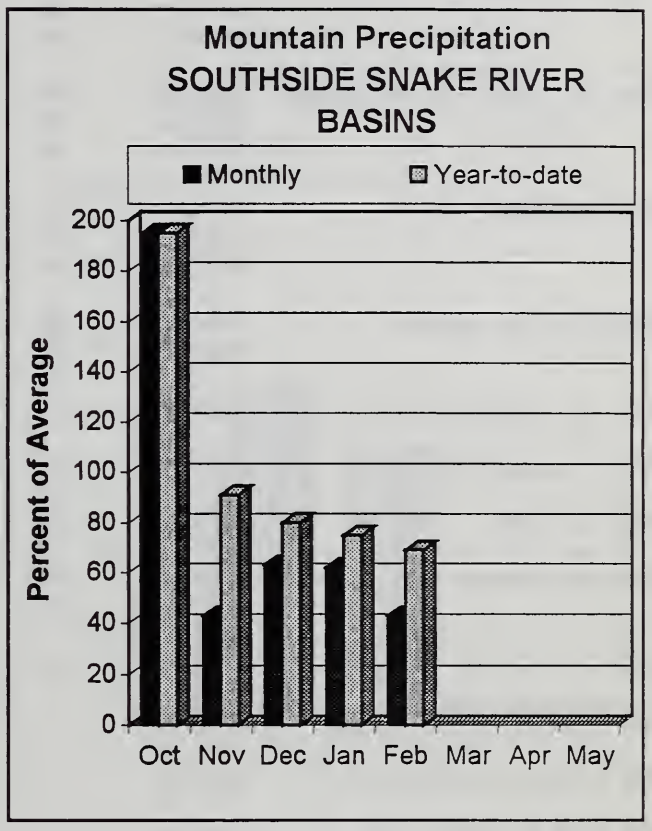
SOUTHSIDE SNAKE RIVER BASINS MARCH 1, 2001





WATER SUPPLY OUTLOOK

After receiving the best monthly precipitation in the state in January, February precipitation was near the lowest in the state at only 43% of average. Water year to date precipitation is the highest in the state along with the Bear River basin at 69% of average. The Owyhee basin hosts the highest snowpack in the state at 81% of average. But a lot of the snow is in the low to mid elevations and not on the higher peaks, such as South Mountain SNOTEL site where water content is just 56% of average, nor are the bigger and deeper snow drifts and cornices developing. The snowpack in the Bruneau, Salmon Falls and Raft basins is about 73% of average and decreases to 63% in the Oakley basin. Salmon Falls Reservoir remains low at only 11% of capacity. Oakley Reservoir is slightly better at 34% of capacity. Owyhee and Wildhorse reservoirs are 41% and 50% of capacity, respectively. Brownlee Reservoir is currently at 92% of capacity, but the April-July forecast decreased again and calls for a meager 41% of average for the Snake River at Hells Canyon Dam. No water is expected to flow past Milner Dam on the mid Snake River this year. Salmon Falls and Oakley reservoir water users should prepare for water supply shortages, as the Surface Water Supply Index (SWSI), which combines reservoir storage with projected streamflow, is below the irrigation threshold shortage. River runners should expect a short runoff season in these high desert streams. Typically, Bear Creek SNOTEL needs a peak of 20 inches of water to have adequate runoff for boating; currently there is only 12 inches. Users can expect low streamflow levels after the snow melts as a result of lack of snow cornices that provide the late season runoff.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESV INFLOW	MAR-JUL	10.1	14.3	17.5	53	21	27	33
	MAR-SEP	11.2	15.7	19.1	53	23	29	36
OAKLEY RESV STORAGE	MAR-31	27	29	29	89	30	31	33
	APR-30	28	30	32	85	34	36	38
	MAY-31	23	27	30	75	33	37	41
SALMON FALLS CREEK nr San Jacinto	MAR-JUN	33	44	52	60	61	76	86
	MAR-JUL	32	43	52	57	62	78	91
	MAR-SEP	34	46	55	57	65	81	96
SALMON FALLS RESV STORAGE	MAR-31	18.9	23	26	41	29	33	64
	APR-30	12.8	18.8	23	28	27	33	83
	MAY-31	29	38	45	48	51	61	93
BRUNEAU near Hot Springs	MAR-JUL	87	120	146	62	174	220	235
	MAR-SEP	89	124	150	61	179	226	246
OWYHEE near Gold Creek (2)	MAR-JUL	7.1	11.6	15.2	48	19.3	26	31
OWYHEE nr Owyhee (2)	APR-JUL	6.1	31	47	55	64	88	86
OWYHEE near Rome	MAR-JUL	120	169	207	38	249	318	545
OWYHEE RESV INFLOW (2)	MAR-JUL	134	185	225	40	268	339	567
	MAR-SEP	127	176	214	36	256	324	595
SUCCOR CK nr Jordan Valley	MAR-JUL	0.1	5.6	9.6	67	13.6	19.4	14.3
SNAKE RIVER at King Hill (1,2)	APR-JUL			1890	65			2896
SNAKE RIVER near Murphy (1,2)	APR-JUL			1920	64			2980
SNAKE RIVER at Weiser (1,2)	APR-JUL			2230	41			5465
SNAKE RIVER at Hells Canyon Dam (1,2	APR-JUL			2510	41			6129
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	5030	10029	12300	57	14571	19570	21650

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	74.5	25.6	39.8	28.7
SALMON FALLS	182.6	20.0	58.3	54.7
WILDHORSE RESERVOIR	71.5	36.1	48.5	33.0
OWYHEE	715.0	292.6	487.3	512.0
BROWNLEE	1419.3	1308.0	1293.1	996.0

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - March 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	4	57	63
Goose-Trapper Creeks	6	61	61
Salmon Falls Creek	8	81	73
Bruneau River	8	76	75
Owyhee Basin Total	20	71	81

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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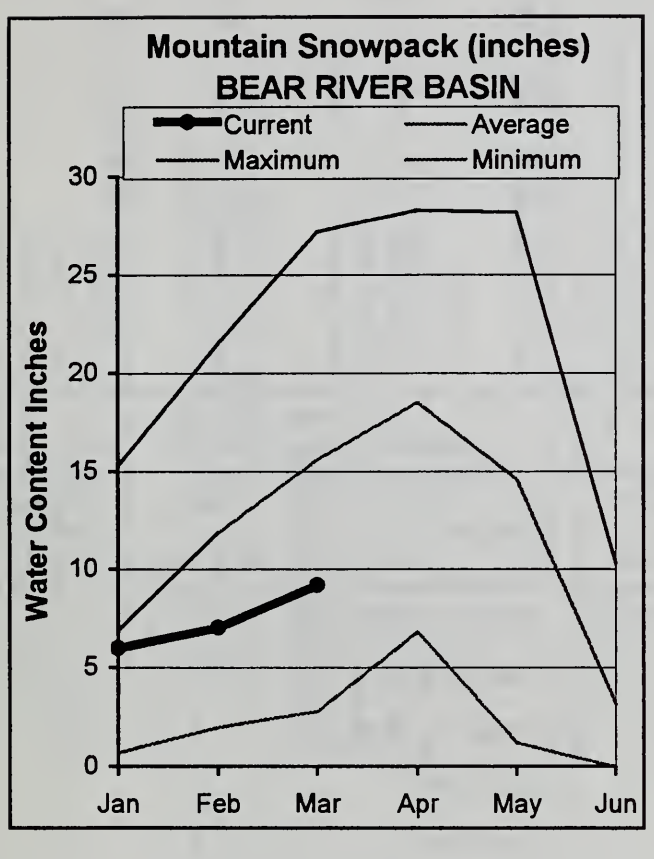
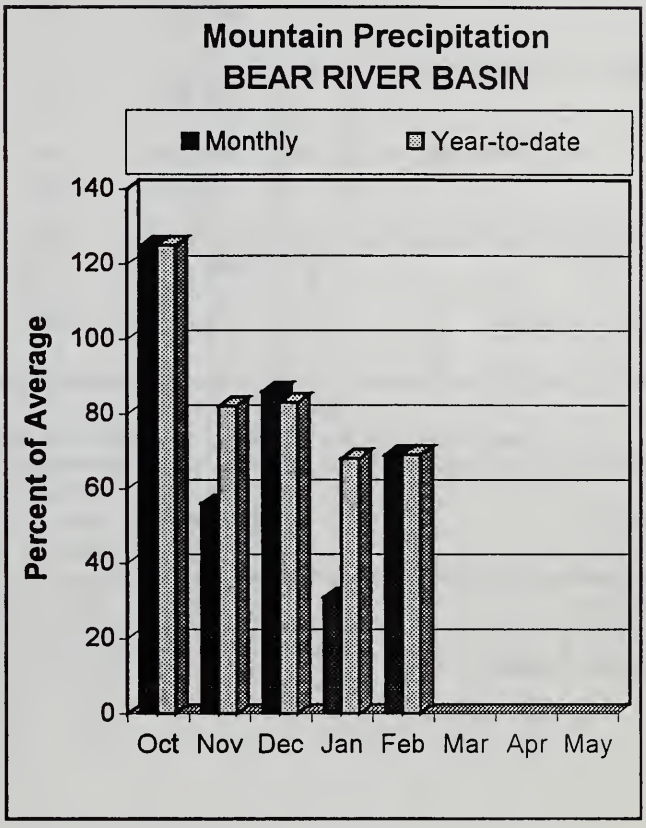
BEAR RIVER BASIN
MARCH 1, 2001





WATER SUPPLY OUTLOOK

February precipitation varied across the basin and ranged from 40-100% of average. Overall, precipitation was 69% of average in February and is 69% for the water year. The snowpack is fairly consistent across the Bear River basin at 65% of average. This is about three-quarters of the amount of snow water that was on the ground last year at this time. Based on a 15-station snow index for the entire Bear River basin, the snowpack is the 5th lowest since 1975. Years with less snow than this year, in order, are 1977, 1981, 1992 and 1987. Streamflow forecasts decreased from last month and now call for 52% of average for Bear River below Stewart Dam. Storage in Bear Lake remains encouraging at 63% of capacity. Montpelier Creek Reservoir is only one-third full. Bear Lake irrigators should have an adequate water supply, however, others who rely on smaller tributaries or reservoirs may experience shortages. These users should be preparing for below normal runoff volumes and early return to baseflow levels.

BEAR RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BEAR R nr Randolph, UT	APR-JUL	6.0	47	75	64	103	144	118
	APR-SEP	0.0	47	78	61	109	156	127
SMITHS FK nr Border, WY	APR-JUL	44	55	63	62	73	90	102
	APR-SEP	51	63	72	61	82	101	118
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	7.5	10.4	13.0	39	16.3	23	33
	APR-SEP	7.0	9.7	12.0	33	14.9	21	36
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	46	108	150	52	192	254	288
	APR-SEP	53	123	170	52	217	287	327
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	4.0	5.1	6.0	49	7.0	8.9	12.2
	APR-SEP	4.7	5.9	6.8	48	7.9	9.8	14.2
CUB R nr Preston	APR-JUL	16.0	23	27	57	32	38	47

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	893.4	1119.6	985.0
MONTPELIER CREEK	4.0	1.4	2.9	1.6

BEAR RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	4	72	63
Bear River ab WY-ID line	6	68	61
Montpelier Creek	2	74	62
Mink Creek	4	73	66
Cub River	3	74	65
Bear River ab ID-UT line	17	71	63
Malad River	3	66	65

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and inter-basin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report. (Revised 12/2000).

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)
BOUNDARY CREEK NEAR PORTHILL, ID – No Corrections
MOYIE RIVER AT EASTPORT, ID – No Corrections
SMITH CREEK NEAR PORTHILL, ID – No Corrections
CLARK FORK AT WHITEHORSE RAPIDS, ID
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)
PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE
+ PEND OREILLE LAKE (STORAGE CHANGE)
+ PRIEST LAKE (STORAGE CHANGE)
PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)
COEUR D'ALENE R AT ENAVILLE, ID - No Corrections
ST. JOE R AT CALDER, ID - No Corrections
SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
SPOKANE R AT LONG LAKE, WA
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
+ LONG LAKE, WA (STORAGE CHANGE)

Clearwater River Basin

DWORSHAK RESERVOIR INFLOW, ID
+ DWORSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID
+ CLEARWATER R NR PECK, ID
CLEARWATER R AT OROFINO, ID - No Corrections
CLEARWATER R AT SPALDING, ID
+ DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

SALMON R AT SALMON, ID - No Corrections
SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections
SF PAYETTE R AT LOWMAN, ID - No Corrections
DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)
LAKE FORK PAYETTE RIVER NR MCCALL, ID – No Corrections
NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)
NF PAYETTE R NR BANKS, ID
+ CASCADE RESV (STORAGE CHANGE)
PAYETTE R NR HORSESHOE BEND, ID
+ DEADWOOD RESV (STORAGE CHANGE)
+ CASCADE RESV (STORAGE CHANGE)
BOISE R NR TWIN SPRINGS, ID - No Corrections
SF BOISE R AT ANDERSON RANCH DAM, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
BOISE R NR BOISE, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
+ ARROWROCK RESV (STORAGE CHANGE)
+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections
BIG WOOD R NR BELLEVUE, ID - No Corrections
CAMAS CREEK NEAR BLAINE – No Corrections
BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
+ MAGIC RESV (STORAGE CHANGE)
LITTLE WOOD R NR CAREY, ID
+ LITTLE WOOD RESV (STORAGE CHANGE)
BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections
BIG LOST R BLW MACKAY RESV NR MACKAY, ID
+ MACKAY RESV (STORAGE CHANGE)
LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections
LITTLE LOST R NR HOWE, ID - No Corrections (Disc)

Upper Snake River Basin

HENRYS FORK NR ASHTON, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
HENRYS FORK NR REXBURG, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID
+ GRASSY LAKE (STORAGE CHANGE)
FALLS R ABV YELLOWSTONE CANAL NR SQUIRREL, ID
+ GRASSY LAKE (STORAGE CHANGE)
TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections
TETON R NR ST. ANTHONY, ID
- CROSS CUT CANAL
+ SUM OF DIVERSIONS ABV GAGE
SNAKE R NR MORAN, WY
+ JACKSON LAKE (STORAGE CHANGE)
PALISADES RESERVOIR INFLOW, ID
+ SNAKE R NR IRWIN, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

SNAKE R NR HEISE, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

BLACKFOOT RESVERVOIR INFLOW, ID
+ BLACKFOOT RIVER
+ BLACKFOOT RESERVOIR (STORAGE CHANGE
SNAKE R NR BLACKFOOT, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID
PORTNEUF R AT TOPAZ, ID - No Corrections
AMERICAN FALLS RESERVOIR INFLOW, ID
+ SNAKE RIVER AT NEELEY
+ ALL CORRECTIONS MADE FOR HENRYS FK NR REXBURG, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT GAGES

Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID
+ GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
+ TRAPPER CK NR OAKLEY, ID
SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
BRUNEAU R NR HOT SPRINGS, ID - No Corrections
OWYHEE R NR GOLD CK, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR OWYHEE, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR ROME, OR – No Corrections
OWYHEE RESERVOIR INFLOW, OR
+ OWYHEE R BLW OWYHEE DAM, OR
+ OWYHEE RESV (STORAGE CHANGE)
+ DIV TO NORTH AND SOUTH CANALS
SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
SNAKE R - KING HILL, ID - No Corrections
SNAKE R NR MURPHY, ID - No Corrections
SNAKE R AT WEISER, ID - No Corrections
SNAKE R AT HELLS CANYON DAM, ID
+ BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

BEAR R NR RANDOLPH, UT
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
SMITHS FORK NR BORDER, WY - No Corrections
THOMAS FORK NR WY-ID STATELINE - No Corrections (Disc)
BEAR R BLW STEWART DAM, ID
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
+ DINGLE INLET CANAL
+ RAINBOW INLET CANAL

MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID (Disc)
+ MONTPELIER CK RESV (STORAGE CHANGE)
CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS (Units in 1,000 acre-feet, KAF)
Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. This table lists these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. (Revised December 2000)

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS CAPACITY INCLUDES
PANHANDLE REGION						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1971.0	ACTIVE
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD+INACTIVE+ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE+ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD+INACTIVE+ACTIVE
CLEARWATER BASIN						
DWORSHAK	--	1452.00	2016.00	--	3468.0	INACTIVE+ACTIVE
WEISER/BOISE/PAYETTE BASINS						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	46.70	646.50	--	693.2	INACTIVE+ACTIVE
DEADWOOD	--	--	161.90	--	161.9	ACTIVE
ANDERSON RANCH	24.90	37.00	413.10	--	450.1	INACTIVE+ACTIVE
ARROWROCK	--	--	272.20	--	272.2	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE+ACTIVE
LAKE LOWELL	7.90	5.80	159.40	--	165.2	INACTIVE+ACTIVE
WOOD/LOST BASINS						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
UPPER SNAKE BASIN						
HENRYS LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE+SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD+INACTIVE+ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
SOUTHSIDE SNAKE BASINS						
OAKLEY	--	--	74.50	--	74.5	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE+ACTIVE
BEAR RIVER BASIN						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD+ACTIVE

Interpreting Streamflow Forecasts

ntroduction

ach month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise pecified, all streamflovv forecasts are for streamflow volumes that would occur naturally without any upstream fluences. Water users need to know what the different forecasts represent if they are to use the information orrectly when making operational decisions. The following is an explanation of each of the forecasts.

ost Probable (50 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow olume that can be produced given current conditions and based on the outcome of similar past situations, There a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance at the streamflow volume will be less than this forecast value.

he most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and e forecast equation itself. This does not mean that users should not use the most probable forecast; it means at they need to evaluate existing circumstances and determine the amount of risk they are willing to take by ccepting this forecast value.

o Decrease the Chance of Having Too Little Water

users want to make sure there is enough water available for their operations, they might determine that a 50 ercent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. o reduce the risk of not having enough water available during the forecast period, users can base their perational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-etween). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value.
There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value.
There is a 10 percent chance the streamflow volume will be less than this forecast value.

o Decrease the Chance of Having Too Much Water

users want to make sure they don't have too much water, they might determine that a 50 percent chance of the treamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecas value.

10 Percent Chance of Exceeding Forecast. there is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecas value.

Using the forecasts - an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Death between March I and July 31.

Using the Higher Exceedence Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three Out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF PAYETTE RIVER at Lowman	APR-JUL	329	414	471	109	528	613	432
	APR-SEP	369	459	521	107	583	673	488
BOISE RIVER near Twin Springs (1)	APR-JUL	443	610	685	109	760	927	631
	APR-SEP	495	670	750	109	830	1005	

For more information concerning streamflow forecasting ask your local NRCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts" or visit our Web page.

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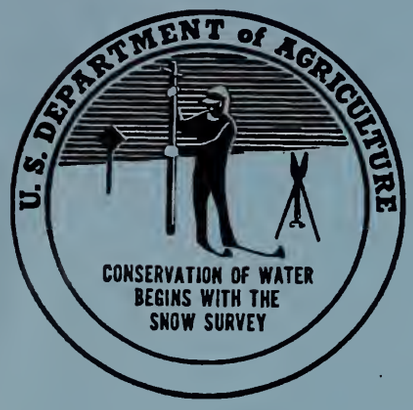

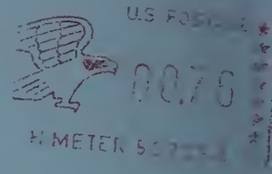

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